Send all "SIT-1" Kits to

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553

ATTN: RA	PHONE - 713 - 744-7141 RAD-CON	
CAUTION:	Conduct a survey of the outside of each package placed in the U.S. Mai Any reading over 0.5 mr/hr at contact with envelope or package shall n be mailed.	ls.
	LEAK TEST INVENTORY/REPORT FORM	
Company N	Name Union Cartiale Corp Hetels Div	
Address	PO Rox 579 City Niagan, Fulle State NY	Zip <u>/4302</u>
ISOTOPE j	Philase Cost Fess Coling ACTIVITY 30 mC, imC, 20	onci, 3mCi
	SERIAL NO. 7222/3 C'-633 23 A-962 LEAK TEST DATE 6/16/8.	
SMEAR TAK	TAKEN BY DR Brosnikan	
	Do Not Write Below This Line	
indicatio	s to certify that the above described smear has been assayed at our facil- tion of source leakage under our Texas Radioactive Material License Nol available upon request)	ities for 1 ₋ 871
	ALPHA BETA-GAMMA	
Our find	ndings show the leakage to be	et)
	" >	
Certifie	1ed by	18/83
	(Fodd Health Physics Representative) SUNTIPAC SERVICES, JUL	

The Todd Research & Technical Division SIT-1 Kit is designed for use with all alpha or beta-gamma emitting sources. It may also be used for testing large gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

For license approval of our service, please refer to "Todd Research & Technical Division SIT-1 Kit" in your application to your State, Division of Licensing, or the NRC Division of Licensing.

CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away, work with your arms extended.
- 4 Conduct a dry-run on all sources in excess of 1 mCi to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding 1/2 cc of water, which renews its effectiveness for testing

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable—to—make—the—smear—on—an—access—ible—area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening
- 4 Replace the source back into its shielded container
- 5. Place the plastic envelope, along with the completed "Leak Test Inventory and Report Form" in the supplied self-addressed envelope and mail to Todd Research & Technical Division
- Open receipt of your completed data sheet and smears from your test kit, Todd Research & Technical Division will perform the necessary assay and evaluation and will issue a certification of the results. The certificate should be retained for review by your licensing authority upon request

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PHONE - 713 - 744-7141 ATTN: RAD-CON Conduct a survey of the outside of each package placed in the U.S. Mails. Any reading over 0.5 mr/hr at contact with envelope or package shall not be mailed. LEAK TEST INVENTORY/REPORT FORM Company Name Union Carlide Corp., Metale Div P.O Box 579 City Niegara Falls State NY Zip 14302 ACTIVITY 50 mC, ISOTOPE IDENT./SERIAL NO. CS-2225 (stack formuce) LEAK TEST DATE 5/23/83 DR Brosnahon SMEAR TAKEN BY Do Not Write Below This Line This is to certify that the above described smear has been assayed at our facilities for indication of source leakage under our Texas Radioactive Material License No. 11-871 (copy available upon request). BETA-GAMMA 4.0005 uCi. (Wet) Our findings show the leakage to be Certified by (Tem Health Physics Representative) SUNTRAC SERVICES, INC.

TSC-RT-36

Todo Shipyards Corporation Research & Technical Division Sealed Source Integrity Test Services

The Todd Research & Technical Division SIT-1 Kit is designed for use with all alpha or beta-gamma emitting sources. It may also be used for testing large gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself.

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Any reading over 0.5 mr/hr at contact with envelope or package shall not

be mailed.

LEAK TEST	INVENTORY	/REPORT	FORM
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Company Name Union Carbide Corp., 1	Yetals Div.		
Address P.O. Box 579		State NY	Zip <i>143</i> 02
	ACTIVITY_30mC;		
IDENT./SERIAL NO. 7222/3, C-633, 23, A-9	•	•	
SMEAR TAKEN BY D.R. Brosnahan			
	e Below This Line		

This is to certify that the above described smear has been assayed at our facilities for indication of source leakage under our Texas Radioactive Material License No. 11-871 (copy available upon request).

Our findings show the leakage to be

	ALPHA	BETA-GAMMA]
+	1.0005	<. 0005°	uCt

uCi. (Wet)

Certified by

(Health Physics Refresentative)

____Date_/2/20/82

SUNTAAL SERVICES, INC

TSC-RT-36 Rev. 4

Todo shipyards corporation research & technical division sealed source integrity test services

The Todd Research & Technical Division SIT-1 Kit is designed for use with all alpha or beta-gamma emitting sources. It may also be used for testing large gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself.

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For license approval of our service, please refer to "Todd Research & Technical Division SIT-1 Kit" in your application to your State, Division of Licensing, or the NRC Division of Licensing.

CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all sources in excess of 1 mCi to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding 1/2 cc of water, which renews its effectiveness for testing.

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- -2. Remove_the_wet_filter_cloth_from_its_envelope (by_using_the_zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
 - 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
 - 4. Replace the source back into its shielded container.
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Send all "SIT-1" Kits to:

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553

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PHONE - 713 ATTN: RAD-CON	- 744-714I
	each package placed in the U.S. Mails. act with envelope or package shall not
LEAK TEST INVI	ENTORY/REPORT FORM
Company Name Union Carbide Corp.	Metals Div.
Address P.O. Box 579	City Niagans Falls State NY Zip 14302
	ACTIVITY 30 mCi, InCi, 20 mCi, 3 mCi
IDENT./SERIAL NO. 7222/3, C-633, 23, A-96	
SMEAR TAKEN BY D.R. Brosnahan	
Do Not Write	Below This Line
This is to certify that the above described sindication of source leakage under our Texas (copy available upon request).	
ALI	PHA BETA-GAMMA
Our findings show the leakage to be	uCi. (Wet)
Certified by (This Health Physics Re	epresentative)

Todo Shipyards Corporation Research & Technical Division Sealed Source Integrity Test Services

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Address P.O. Box 579 City Niagara Falls State NY Zip 14302 ACTIVITY 3 m C; ISOTOPE LEAK TEST DATE 12/16/81 IDENT./SERIAL NO. A-962 SMEAR TAKEN BY D. R Brosnahon Do Not Write Below This Line This is to certify that the above described smear has been assayed at our facilities for indication of source leakage under our Texas Radioactive Material License No. 11-871 (copy available upon request). **ALPHA** BETA-GAMMA 4.0005 uCi. (Wet) Our findings show the leakage to be Date 12/21/81 Certified by (Toda Health Physics Representative) SUNTRAC SERVICES, INC.

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LEAK TEST INVENTOR	Y/REPORT FORM
Company Name Union Carbide Corp., Het	ils D.V.
Address P.O Bex 579 Ci	ty Niagara Falls State NY ZIP 14302
ISOTOPE Co 57	ACTIVITY 1 nC.
IDENT./SERIAL NO. <u>C-633</u>	
SMEAR TAKEN BY D.R. Brosnehan	
Do Not Write Belo	w This Line
This is to certify that the above described smear indication of source leakage.	
Our findings show the leakage to be	BETA-GAMMA
Certified by (Fodd Health Physics Repres	entative)

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LEAK TEST INVENTORY/REPORT FORM
Company Name Union Carbide Corp. Hetals Div
Address P.O. Box 579 City Niagon Falls State NY Zip 14302 ISOTOPE Pu 238 ACTIVITY 30 mCi
ISOTOPE Pu 238 ACTIVITY 30 mCi
IDENT./SERIAL NO. 7222/3 LEAK TEST DATE 12/16/31
SMEAR TAKEN BY D.R Brosnocken
Do Not Write Below This Line
This is to certify that the above described smear has been assayed at our facilities for indication of source leakage under our Texas Radioactive Material License No. 11-871 (copy available upon request).
ALPHA BETA-GAMMA
Our findings show the leakage to be 2.0005 2.0005 uCi. (Wet)
Certified by

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TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553

PHONE - 713 - 744-7141 ATTN: RAD-CON Conduct a survey of the outside of each package placed in the U.S. Mails. Any reading over 0.5 mr/hr at contact with envelope or package shall not be mailed. City Niesus Elle State WY Zip 14802 4625 Koyal Ave, ACTIVITY 3 & C **ISOTOPE** LEAK TEST DATE ++++ 6/16/81 962 IDENT./SERIAL NO. SMEAR TAKEN BY 0592 Do Not Write Below This Line This is to certify that the above described smear has been assayed at our facilities for indication of source leakage. uCi. (Wet) Our findings show the leakage to be Date 6/24/8/ Certified by (Todd Health Physics Representative)

> TSC-RT-36 Rev. 4

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CAUTION

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- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 Co up to 40 mCi and 137 Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding $\frac{1}{2}$ cc of water, which renews its effectiveness for testing.

TO PERFORM TEST

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

UCCNHT0001386

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553 PHONE - 713 - 744-7141

ATTN: RAD-CON	/ 44- / 4
CAUTION: Conduct a survey of the outside of ea Any reading over 0.5 mr/hr at contact be mailed.	
LEAK TEST INVENT	ORY/REPORT FORM
Company Name Union Carpide Corp. A	letals Div.
Address P.D. Box 579 4625 Royal Ave.	City Niesan Falls State NY Zip 14302
ISOTOPE le 55	ACTIVITY 20 m C
	LEAK TEST DATE 6/16/81
SMEAR TAKEN BY D. R. Brosnahan	
Do Not Write Be	low This Line
This is to certify that the above described sme indication of source leakage.	ar has been assayed at our facilities for
Our findings show the leakage to be	BETA-GAMMA Less Thany 1.0005 uCi. (Wet)
Certified by Club Control Control Health Physics Repr	Date 24 Sine 81

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself.

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

For license approval of our service, please refer to "Todd Research and Technical Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division of Licensing.

CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 Co up to 40 mCi and 137 Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding ½ cc of water, which renews its effectiveness for testing.

- 1. Remove the source from its container and place it in a shielded area. (In those cases—where it is impractical—to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553 PHONE - 713 - 744-7141

ATTN. RAD-CON
CAUTION: Conduct a survey of the outside of each package placed in the U.S. Mails. Any reading over 0.5 mr/hr at contact with envelope or package shall not be mailed.
LEAK TEST INVENTORY/REPORT FORM
Company Name Union Carbide Corp. Metels Div.
Company Name Union Carbide Corp. Metals Div. Address Po. Rox 579 4625 Royal Ave. City Niegus Fells State NY Zip 14302
ISOTOPE Per 238 ACTIVITY 30 4 Gi
IDENT./SERIAL NO. 7222/3 LEAK TEST DATE 6/16/81 SMEAR TAKEN BY D.R. Brownsky
Do Not Write Below This Line
This is to certify that the above described smear has been assayed at our facilities for indication of source leakage.
Our findings show the leakage to be \(\begin{align*} ALPHA \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Certified by 3. L. Shuntur Date 6/24/81
(Todd Health Physics Representative)

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself.

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

For license approval of our service, please refer to "Todd Research and Technical Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division of Licensing.

CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 Co up to 40 mCi and 137 Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding $\frac{1}{2}$ cc of water, which renews its effectiveness for testing.

- 1. Remove the source from its container and place it in a shielded area. (In -those-cases where it is impractical—to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553 PHONE - 713 - 744-7141

ATTN: RAD-CON

ISOTOPE

Any reading over 0.5 mr/hr at contact with envelope or package shall not be mailed.

LEAK TEST INVENTORY/REPORT FORM

Company Name Union Carbide Corp., Metals Div.

Address P.D. Pox 579 4625 Royal Are. City Wiese Falls State WY Zip 14302

Conduct a survey of the outside of each package placed in the U.S. Mails.

SMEAR TAKEN BY D. R. Brosne len

Do Not Write Below This Line

This is to certify that the above described smear has been assayed at our facilities for indication of source leakage.

Our findings show the leakage to be

ALPHA BETA-GAMMA
Less THISM
L.0005

ACTIVITY

uCi. (Wet)

Certified by

(Todd Health Physics Representative)

Date -

Todd Shipyards Corporation Research & Technical Division

SEALED SOURCE INTEGRITY TEST SERVICES

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself.

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

For license approval of our service, please refer to "Todd Research and Technical" Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division of Licensing.

CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 Co up to 40 mCi and 137 Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding ½ cc of water, which renews its effectiveness for testing.

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553 PHONE - 713 - 744-7141

ATTN: RAD-C	CON						
Ar		vey of the out ver 0.5 mr/hr					
	 .	LEAK T	 EST INVENT	ORY/REPORT	FORM		
Company Name	Union	Carbide C	orp.	Metals	Div.		<u></u>
Address P.	D. Box 579	4625 Ropel	Ave.	City N	sa Falls	State <u>NY</u>	Z1p <i>1430</i> 2
ISOTOPE C	d 109			ACTIVI	TY 3 m	C:	
IDENT./SERIA	NO	962		LEAK T	EST DATE	12/16/80	
SMEAR TAKEN	BY D. 2.	962 Brosneho	m				
			t Write Be			<u>'</u>	· · · · · · · · · · · · · · · · · · ·
	certify that of source lea	the above desakage.	cribed sme	ər has bee	n assayed	at our facil	ities for
Our findings	s show the le	eakage to be	ALPHA		TA-GAMMA	uCi. (W	et)
Certified by		Todd Health Phy	gui ysics Repr	esentative)	Date <i></i>	19 80
				•			

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself.

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

For license approval of our service, please refer to "Todd Research and Technical Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division of Licensing.

CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 co up to 40 mCi and 137 cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding ½ cc of water, which renews its effectiveness for testing.

- 1. Remove the source from its container and place it in a shielded area. (In _____those__cases_where it_is_impractical to remove a permanently fixed_source_from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553

PHONE - 713 - 744-7141
ATTN: RAD-CON
CAUTION: Conduct a survey of the outside of each package placed in the U.S. Mails. Any reading over 0.5 mr/hr at contact with envelope or package shall not be mailed.
LEAK TEST INVENTORY/REPORT FORM
Company Name Union Carbide Corp., Metals Dir.
Address P.D. Bax 579 4625 Royal Ave City Widgen Falls State NY Zip 14302
ISOTOPE Co 57 ACTIVITY / n C:
IDENT./SERIAL NOLEAK TEST DATE _12/16/80
SMEAR TAKEN BY D. R. Brosmahan
Do Not Write Below This Line
This is to certify that the above described smear has been assayed at our facilities for indication of source leakage.
Our findings show the leakage to be ALPHA BETA-GAMMA 2.0005 U.0005 UCi. (Wet)
Certified by Jakie Date 18/19/80 (Todd Health Physics Representative)

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself.

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For license approval of our service, please refer to "Todd Research and Technical Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division-of-Licensing.

CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60Co up to 40 mCi and 137Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding ½ cc of water, which renews its effectiveness for testing.

TO PERFORM TEST

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

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UCCNHT0001396

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553 PHONE - 713 - 744-7141

ATIN: KAD-CON	
CAUTION: Conduct a survey of the outside of each package placed in the U.S. Any reading over 0.5 mr/hr at contact with envelope or package shabe mailed.	
LEAK TEST INVENTORY/REPORT FORM	
Company Name Union Carbide Corp., Metals Div.	,
Company Name Union Carbide Corp., Metals Div. Address P.D.Box 579 4625 Royal Ave. City Niagare Falls State N	Y Zip 14302
ISOTOPE Pac 238 ACTIVITY 30 m.C;	
smear taken by D. P. Brosnohan	80
SMEAR TAKEN BY D. R. Brosnohan	
Do Not Write Below This Line	
This is to certify that the above described smear has been assayed at our facindication of source leakage.	cilities for
ALPHA BETA-GAMMA	
Our findings show the leakage to be U.0005 UCi.	(Wet)
Certified by Jakaie Date 1	2/19/80
(Todd Health Physics Representative)	/ /

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, etc., rather than the source capsule itself.

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

For license approval of our service, please refer to "Todd Research and Technical Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division of Licensing.

CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mC1, gamma sources on 60 Co up to 40 mC1 and 137 Cs up to 150 mC1, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding ½ cc of water, which renews its effectiveness for testing.'

TO PERFORM TEST

1

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

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TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553

PHONE - 713 - 744-7141 ATTN: RAD-CON
CAUTION: Conduct a survey of the outside of each package placed in the U.S. Mails. Any reading over 0.5 mr/hr at contact with envelope or package shall not be mailed.
LEAK TEST INVENTORY/REPORT FORM
Company Name Union Carbide Corp., Hetals Div.
Address P.O. Box 579 4625 Royal Ave City Niagra Falls State WY Zip 14302
ISOTOPE Fe 55 ACTIVITY 20 mCi
IDENT./SERIAL NO. 23 LEAK TEST DATE 12/16/80
SMEAR TAKEN BY D. R. Brosna han
Do Not Write Below This Line
This is to certify that the above described smear has been assayed at our facilities for indication of source leakage.
ALPHA BETA-GAMMA
Our findings show the leakage to be uCi. (Wet)
Certified by
(Todd Health Physics Representative)

TODD SHIPYARDS CORPORATION RESEARCH & TECHNICAL DIVISION

SEALED SOURCE INTEGRITY TEST SERVICES

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, ets., rather than the source capsule itself.

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

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For license approval of our service, please refer to "Todd Research and Technical Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division of Licensing.

CAUTION

- 1. Portable survey instrments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 Co up to 40 mCi and 173 Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding 1/2 c.c. of water, which renews its effectiveness for testing.

TO PERFORM TEST

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

The cost of this service is based on the number of kits returned for assay at any one time. The price for 1 to 5 kits is \$9.00 each, this cost being possible by your remittance of payment with the leak test request, thereby eliminating billing cost. For larger quantities, a leak test price list is available upon request. Kits received that are not prepaid will cause a \$25.00 billing fee to be charged to all customers unless previous arrangements have been made i.e. purchase orders and etc.

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553 PHONE - 713 - 744-7141

ATTN RAD) — COM	PHONE - /13	144 1141			
CAUTION:	Conduct a surve Mails. Any rea package shall r	ding over 0 5	mr/hr at c	package placed 1 ontact with envel	ope or	 S.
	LE	AK TEST INVEN	TORY / REPO	ORT FORM		
Company	Name Union	Carbide Ca	rp. Me	tals Div.	,	
Address	P.D. Box 579	4625 City 1	Jiagane Fa	State NY Activity ?	Z1p <u>/43</u>	02
Isotope	Cd 109	Royal Ave.		Activity 3	e Ci	
Ident./	Serial No. A	- 962		Leak Test Dat	e <i>6/16/8</i>	<u>'0</u>
Smear I	Taken By D.P.	Brosnahan				
		Do Not Write F	Below This	Line		
This is	to certify that	the above des	scribed sme ce leakage	ar has been assay	ed at	
			ALPHA	BETA-GAMMA		
Our fir	ndings show the	eakage to be		<.0005	μC1.	(wet
			(

Certified by (Todd Health Rysics Representative)

TSC-RT-36 Rev. 3 2/14/75

___Date <u>)-)-をみ</u>

& TECHNICAL DIVISION TODD SHIPYARDS CORPORATION RESEARCH SEALED SOURCE INTEGRITY TEST SERVICES

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, ets., rather than the source capsule itself.

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

For license approval of our service, please refer to "Todd Research and Technical Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division of Licensing.

- Portable survey instrments should be used during all smear testing.
 Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mC1, gamma sources on 60 Co up to 40 mC1 and 173 Cs up to 150 mC1, to assure that shielding is sufficient to limit the exposure of personnel doing the test. .
- 5. If the "wet" patch dries out, it should be moistened by adding 1/2 c.c. of water, which renews its effectiveness for testing.

TO PERFORM TEST

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should_be_kept_shielded while smearing the area.)
- Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

The cost of this service is based on the number of kits returned for assay at any one time. The price for 1 to 5 kits is \$9.00 each, this cost being possible by your remittance of payment with the leak test request, thereby eliminating billing cost. For larger quantities, a leak test price list is available upon request. Kits received that are not prepaid will cause a \$25.00 billing fee to be charged to all customers unless previous arrangements have been made i.e. purchase orders and etc.

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553

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ATTN - RAD - CON	PHONE - 71	3 - 744-7141			
Mails. A	survey of the out ny reading over 0 hall not be mailed	5 mr/hr at o	n package placed contact with envel	lope or	 .s.
	LEAK TEST INV	ENTORY / REP	ORT FORM		
Company Name Un	ion Carbide C.	emp. Me	tals Div.		
Address P.O. Ber 5	79 4625 Royal City Ave.	Niagara Fa	//s State NY	Z1p /4	302
Isotope Pu 23	8		Activity 3	o mCi	
Ident./Serial No.	· ·		Leak Test Dat	te <i>6/16/</i>	180
Smear Taken By	D. R. Brosnah				
	Do Not Write	Below This	Line		
This is to certifour facilities fo	y that the above dor indication of so	escribed sme urce leakage	ear has been assay	yed at	
		ALPHA	BETA-GAMMA		
Our findings show	the leakage to be	<.0005	<.0805	μC1.	(wet
Certified by	(Todd Wealth Phys	cs Represe	Dat	te	

TSC-RT-36 Rev. 3 2/14/75 **455-00039**

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, ets., rather than the source capsule itself.

In special cases where a source is permanently fixed into a system, the closest and most accessible surface such as conical port, source housings, etc., may be taken as the smear area. The kit consists of one piece of filter cloth in a plastic zip-lip envelope, wet with our decontamination solution.

For license approval of our service, please refer to "Todd Research and Technical Division SIT-1 Kit" in your application to State of Texas, Division of Licensing, or the NRC Division of Licensing.

CAUTION

1. Portable survey instrments should be used during all smear testing.

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- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 Co up to 40 mCi and 173 Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding 1/2 c.c. of water, which renews its effectiveness for testing.

TO PERFORM TEST

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

The cost of this service is based on the number of kits returned for assay at any one time. The price for 1 to 5 kits is \$9.00 each, this cost being possible by your remittance of payment with the leak test request, thereby eliminating billing cost. For larger quantities, a leak test price list is available upon request. Kits received that are not prepaid will cause a \$25.00 billing fee to be charged to all customers unless previous arrangements have been made i.e. purchase orders and etc.

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553 PHONE - 713 - 744-7141

ATTN - RAD - CON

AUTION: Conduct a survey of the outs Mails. Any reading over 0.5 package shall not be mailed	5 mr/hr at \circ	contact with enve	in the U.S.	•
LEAK TEST INV				
Company Name Union Carbide C	orp., Met	tals Div.		-
Address P.O. Pox 579 4625 Royal City_Ave.	Nigara /	State NY	Z1p /4302	<u>;</u>
Isotope Co 57 Ave.		Activity/	m Ci	
Ident./Serial No. C-633		Leak Test Date 6/16/83		
Smear Taken By D. R. Brosneha				_
This is to certify that the above de our facilities for indication of sou	escribéd sm	ear has been assa	yed at	•
	- ALPHA	BETA-GAMMA		
Our findings show the leakage to be		<.0005 ·	μC1. (w	et)
Certified by(Todd Health Physic	Represe		te <u>)-7-80</u>	

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CAUTION

- 1. Portable survey instruments should be used during all smear testing.
- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 Co up to 40 mCi and 137 Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding ½ cc of water, which renews its effectiveness for testing.

- 1. Remove the source from its container and place it in a shielded area. (In those_cases_where it is_impractical to_remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source should be kept shielded while smearing the area.)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
- 4. Place the plastic envelope, along with the "Leak Test Request and Report Form" in the supplied self-addressed envelope and mail to Todd Research and Technical Division.
- 5. Upon receipt of your completed data sheet and smears from your test, Todd Research and Technical Division will perform the necessary evaluation and will issue a certification of the results. The certificate should be retained for review by the Texas State Compliance Division upon request.

TODD RESEARCH & TECHNICAL DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553 PHONE - 713 - 744-7141

ATTN: RAD-CON	•
	of each package placed in the U.S. Mails. Intact with envelope or package shall not
LEAK TEST IN	IVENTORY/REPORT FORM
Company Name Union Carbide Corp	Metals Div.
Address P.O. Box 579 4625 Royal Ave.	City Niegaro Falls State NY Zip 14302
ISOTOPE Fe 55	ACTIVITY 20 mC;
IDENT./SERIAL NO. 23	LEAK TEST DATE 6/16/80
SMEAR TAKEN BY D. R. Brosnahan	
	e Below This Line
This is to certify that the above described indication of source leakage.	I smear has been assayed at our facilities for
Our findings show the leakage to be	SETA-GAMMA
Certified by(Todd Health Physics	Date 3-7-80 Representative)

TODD SHIPYARDS CORPORATION RESEARCH & TECHNICAL DIVISION

SEALED SOURCE INTEGRITY TEST SERVICES

The Todd Research and Technical Division SIT-1 Kit is designed for use with alpha or beta-gamma emitting sources or for low level gamma sources. It may also be used for testing large radiography gamma sources, where due to the potential radiation hazard, a smear is taken of the inside surface of the source housing, cable, ets., rather than the source capsule itself.

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CAUTION

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- 2. Rubber gloves should be worn, especially when handling beta sources.
- 3. Always use tweezers, tongs, forceps or handles to keep all sources at least one foot away; work with your arms extended.
- 4. Conduct a dry-run on all beta sources in excess of 1 mCi, gamma sources on 60 Co up to 40 mCi and 173 Cs up to 150 mCi, to assure that shielding is sufficient to limit the exposure of personnel doing the test.
- 5. If the "wet" patch dries out, it should be moistened by adding 1/2 c.c. of water, which renews its effectiveness for testing.

TO PERFORM TEST

- 1. Remove the source from its container and place it in a shielded area. (In those cases where it is impractical to remove a permanently fixed source from a special container, it is acceptable to make the smear on an accessible area adjacent to the source, for example, inside a conical beaming port. The source————should—be-kept-shrelded-while-smearing the-area:)
- 2. Remove the wet filter cloth from its envelope (by using the zip-lip opening) and thoroughly smear the source or the area of the source container which contacts the source.
- 3. Replace this smear in the plastic envelope marked "WET SMEAR ONLY" and reseal the zip-lip opening.
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DIVISION P.O. BOX 1600 GALVESTON, TEXAS 77553

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ATTN - RAD - CON	PHONE - 713	- - - - - - - - - -			
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Mails.	a survey of the outsi Any reading over 0.5 shall not be mailed	de of each	package placed contact with enve	in the U.	, S.
	LEAK TEST INVEN	ITORY / REPO	ORT FORM		
Company Name <u>(</u>	Inion Carbide Co	rp, Met	als Div		
	4625- Royal Ave City N			Z1p <u>/4</u> 3	2 <u>0</u> 2
	137				
Ident./Serial No	o. <u>CS - 2225</u> (s	tack)	Leak Test Da	te <u>5/2.3/2</u>	<u></u>
Smear Taken By_	D.R Brosnahan	?			
	Do Not Write B	selow This	Line		
					,
This is to cert;	ify that the above des for indication of sour	cribed sme ce leakage	ear has been assa	yed at	
		ALPHA	BETA-GAMMA		
Our findings sho	ow the leakage to be	_	2.0005	μC1.	(wet)
Certified by	Todd Health Physic	A Carresen	Da tative)	te <u>6-3-</u>	-80
	(Iouu Iouxon Inyoxo		· · /		

TSC-RT-36 Rev. 3 2/14/75

455-00029

TODD SHIPYARDS CORPORATION RESEARCH & TECHNICAL DIVISION

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